

Unit 7: Geometry and Fractions

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **Full Year**
Status: **Published**

UNIT RATIONALE

The purpose of this unit is for students to identify and sort two- and three- dimensional shapes. Students will also be introduced to fractions. They will be able to identify, show, and describe equal shares.

ESSENTIAL QUESTIONS

Module 21- Two- and Three- Dimensional Shapes

- How can we identify two- and three- dimensional shapes?
- How can we sort two- and three- dimensional shapes?

Module 22- Understanding Fractions

- How can we identify and describe equal shares?
- How can we draw equal shares?

STANDARDS

NEW JERSEY STUDENT LEARNING STANDARDS: CONTENT AREA

New Jersey (NJSL) - Grade 2 - Mathematics (2020)

2.NBT.B.5

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

2.NBT.B.7

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

2.MD.A.3

Estimate lengths using units of inches, feet, centimeters, and meters.

2.G.A.1

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.5 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

2.G.A.2

Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

2.G.A.3

Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

MA.2.NBT.B.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
MA.2.NBT.B.7	Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
MA.2.MD.A.3	Estimate lengths using units of inches, feet, centimeters, and meters.
MA.2.G.A.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
MA.2.G.A.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
MA.2.G.A.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

NEW JERSEY STUDENT LEARNING STANDARDS: CAREER READINESS, LIFE LITERACIES AND KEY SKILLS

TECH.9.4.2.CT.3 Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

NEW JERSEY STUDENT LEARNING STANDARDS: COMPUTER SCIENCE AND DESIGN THINKING

CS.K-2.8.2.2.ITH.3 Identify how technology impacts or improves life.

PRE-ASSESSMENTS

Module 21- Two- and Three- Dimensional Shapes, Are you ready?, pg. 516

Module 22- Understanding Fractions, Are you ready?, pg. 540

MODULE 21

MODULE 21: Two and Three-Dimensional Shapes

LESSON 21.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	21.1- We are learning to identify and describe three-dimensional shapes according to the number of faces, edges, and vertices.
Student Learning Strategies	Students will: - use three dimensional shapes, boxes, markers and dot paper to help identify and describe three-dimensional shapes.
Success Criteria	I can describe and compare the attributes of three-dimensional shapes.
Formative Assessment (drives instructional decisions)	<ul style="list-style-type: none">• Turn and Talk questions, pgs. 517-519• Check for understanding, pg. 520• On your own, pg. 521-522
Activities and Resources	Warm Up: Activate Prior Knowledge pg. 517B and Spark your learning pg. 517D Mini Lesson: Build Your Understanding, pgs. 517-519 Guided Practice: Check Understanding, pg. 520 Independent Practice: On Your Own & Exit Ticket , pg. 512-522 Resources: Into Math Teacher Edition Module 21
Suggested Modifications	Small Group Options- Page 517c <ul style="list-style-type: none">• On Track• Almost There• Ready for More

	<p>Math Center Option- Page 516c</p> <ul style="list-style-type: none"> • On Track- More practice for 21.1/Interactive glossary • Almost there-Reteach 21.1 • Ready for more- Challenge 21.1 <p>Differentiation Options-</p> <ul style="list-style-type: none"> • Reteach & Challenge pg. 520
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MA.2.NBT.B.5

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

MA.2.G.A.1

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

LESSON 21.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	21.2- We are learning to name three-, four-, five-, and six- sided shapes according to the number of sides and vertices.
Student Learning Strategies	Students will: - use two-dimensional shapes and index cards to name and describe shapes.
Success Criteria	I can describe and compare the attributes of two-dimensional shapes.
Formative Assessment (drives instructional decisions)	<ul style="list-style-type: none"> • Turn and Talk questions, pgs. 523-525 • Check for understanding, pg. 526 • On your own, pg. 527-528
Activities and Resources	<p>Warm Up: Activate Prior Knowledge pg. 523B and Spark your learning pg. 523D</p> <p>Mini Lesson: Build Your Understanding, pgs. 523-525</p> <p>Guided Practice: Check Understanding, pg. 526</p> <p>Independent Practice: On Your Own & Exit Ticket pg. 527-528</p> <p>Resources: Into Math Teacher Edition Module 21</p>

Suggested Modifications

Small Group Options- Page 523c

- On Track
- Almost There
- Ready for More

Math Center Option- Page 523c

- On Track- More practice for 21.2/Interactive glossary/My lesson summary/Game: Hidden Shapes
- Almost there-Reteach 21.2
- Ready for more- Challenge 21.2

Differentiation Options-

- Reteach & Challenge pg. 526

MA.2.NBT.B.5

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

MA.2.G.A.1

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

LESSON 21.3

Student Learning Intentions (SLI) WALT: (We are learning to...)

21.3- We are learning to identify angles in two-dimensional shapes.

Student Learning Strategies

Students will:

- use two-dimensional shapes to help find and count angles.

Success Criteria

I can find and count angles in two-dimensional shapes.

Formative Assessment (drives instructional decisions)

- Turn and Talk questions, pgs. 529-531
- Check for understanding, pg. 531
- On your own, pg. 532

Activities and Resources

Warm Up: Activate Prior Knowledge pg. 529B and Spark your learning pg. 529D

Mini Lesson: Build Your Understanding, pgs. 529-531

	<p>Guided Practice: Check Understanding, pg. 531</p> <p>Independent Practice: On Your Own & Exit Ticket pg. 532</p> <p>Resources: Into Math Teacher Edition Module 21</p>
<p>Suggested Modifications</p>	<p>Small Group Options- Page 529c</p> <ul style="list-style-type: none"> • On Track • Almost There • Ready for More <p>Math Center Option- Page 529c</p> <ul style="list-style-type: none"> • On Track- More practice for 21.3/Interactive glossary • Almost there-Reteach 21.3 • Ready for more- Challenge 21.3 <p>Differentiation Options-</p> <ul style="list-style-type: none"> • Reteach & Challenge pg. 531

MA.2.G.A.1

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

LESSON 21.4

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>21.4- We are learning to sort two-dimensional shapes according to their attributes.</p>
<p>Student Learning Strategies</p>	<p>Students will:</p> <ul style="list-style-type: none"> - use two-dimensional shapes to help compare and name sides and angles.
<p>Success Criteria</p>	<p>I can compare two-dimensional shapes by the number of sides and angles.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<ul style="list-style-type: none"> • Turn and Talk questions, pgs. 533-534 • Check for understanding, pg.535 • On your own, pg. 536
<p>Activities and Resources</p>	<p>Warm Up: Activate Prior Knowledge pg. 533B and</p>

	<p>Spark your learning pg. 533D</p> <p>Mini Lesson: Build Your Understanding, pgs. 533-535</p> <p>Guided Practice: Check Understanding, pg. 535</p> <p>Independent Practice: On Your Own & Exit Ticket pg. 536</p> <p>Resources: Into Math Teacher Edition Module 21</p>
<p>Suggested Modifications</p>	<p>Small Group Options- Page 533c</p> <ul style="list-style-type: none"> • On Track • Almost There • Ready for More <p>Math Center Option- Page 533c</p> <ul style="list-style-type: none"> • On Track- More practice for 21.4/My learning summary/Standards practice: Identify and draw attributes of shapes • Almost there-Reteach 21.4 • Ready for more- Challenge 21.4 <p>Differentiation Options-</p> <ul style="list-style-type: none"> • Reteach & Challenge pg. 535

MA.2.G.A.1

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

MODULE 22

Module 22: Understanding Fractions

LESSON 22.1

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>22.1- We are learning to partition rectangles into same-sized squares and find the total of these squares.</p>
<p>Student Learning Strategies</p>	<p>Students will:</p> <ul style="list-style-type: none"> - use color tiles to help partition rectangles into squares.

Success Criteria	I can find the total number of color tiles that will cover a rectangle.
Formative Assessment (drives instructional decisions)	<ul style="list-style-type: none"> • Turn and Talk questions, pgs. 541-542 • Check for understanding, pg. 543 • On your own, pg. 544
Activities and Resources	<p>Warm Up: Activate Prior Knowledge pg. 541B and Spark your learning pg. 541D</p> <p>Mini Lesson: Build Your Understanding, pgs. 541-543</p> <p>Guided Practice: Check Understanding, pg. 543</p> <p>Independent Practice: On Your Own & Exit Ticket , pg. 544</p> <p>Resources: Into Math Teacher Edition Module 22</p>
Suggested Modifications	<p>Small Group Options- Page 541c</p> <ul style="list-style-type: none"> • On Track • Almost There • Ready for More <p>Math Center Option- Page 541c</p> <ul style="list-style-type: none"> • On Track- More practice for 22.1/Standards practice: Partition a rectangle into squares and find the total number of them • Almost there-Reteach 22.1 • Ready for more- Challenge 22.1 <p>Differentiation Options-</p> <ul style="list-style-type: none"> • Reteach & Challenge pg. 543

MA.2.G.A.1

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

MA.2.G.A.2

Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

MA.2.G.A.3

Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

LESSON 22.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	22.2- We are learning to identify and name equal shares of circles and rectangles as halves, thirds, or fourths.
Student Learning Strategies	Students will: - use color tiles to name and partition shapes.
Success Criteria	I can identify and name shares of shapes as halves, thirds, and fourths.
Formative Assessment (drives instructional decisions)	<ul style="list-style-type: none"> • Turn and Talk questions, pgs. 545-547 • Check for understanding, pg. 548 • On your own, pg. 549-550
Activities and Resources	<p>Warm Up: Activate Prior Knowledge pg. 545B and Spark your learning pg. 545D</p> <p>Mini Lesson: Build Your Understanding, pgs. 545-547</p> <p>Guided Practice: Check Understanding, pg. 548</p> <p>Independent Practice: On Your Own & Exit Ticket pg. 549-550</p> <p>Resources: Into Math Teacher Edition Module 22</p>
Suggested Modifications	<p>Small Group Options- Page 545c</p> <ul style="list-style-type: none"> • On Track • Almost There • Ready for More <p>Math Center Option- Page 545c</p> <ul style="list-style-type: none"> • On Track- More practice for 22.2/Interactive glossary/Reader: The Pizza Puzzle • Almost there-Reteach 22.2 • Ready for more- Challenge 22.2 <p>Differentiation Options-</p> <ul style="list-style-type: none"> • Reteach & Challenge pg. 548

MA.2.G.A.2

Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

MA.2.G.A.3

Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

LESSON 22.3

Student Learning Intentions (SLI) WALT: (We are learning to...)	22.3- We are learning to partition circles and rectangles to show halves, thirds, and fourths.
Student Learning Strategies	Students will: - use crayons to draw and partition shapes.
Success Criteria	I can draw to show halves, thirds, and fourths of a shape.
Formative Assessment (drives instructional decisions)	<ul style="list-style-type: none">• Turn and Talk questions, pgs. 551-552• Check for understanding, pg. 553• On your own, pg. 554
Activities and Resources	<p>Warm Up: Activate Prior Knowledge pg. 551B and Spark your learning pg. 551D</p> <p>Mini Lesson: Build Your Understanding, pgs. 551-553</p> <p>Guided Practice: Check Understanding, pg. 553</p> <p>Independent Practice: On Your Own & Exit Ticket , pg. 554</p> <p>Resources: Into Math Teacher Edition Module 22</p>
Suggested Modifications	<p>Small Group Options- Page 551c</p> <ul style="list-style-type: none">• On Track• Almost There• Ready for More <p>Math Center Option- Page 551c</p> <ul style="list-style-type: none">• On Track- More practice for 22.3/My learning summary• Almost there-Reteach 22.3• Ready for more- Challenge 22.3 <p>Differentiation Options-</p> <ul style="list-style-type: none">• Reteach & Challenge pg. 553

MA.2.MD.A.3

Estimate lengths using units of inches, feet, centimeters, and meters.

MA.2.G.A.3

Partition circles and rectangles into two, three, or four equal shares, describe the shares

using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

LESSON 22.4

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>22.4- We are learning to identify and describe one equal share as a half of, a third of, or a fourth of a whole.</p>
<p>Student Learning Strategies</p>	<p>Students will: -use crayons to draw and color shapes.</p>
<p>Success Criteria</p>	<p>I can draw and color to show a half, a third, or a fourth of a shape.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<ul style="list-style-type: none"> • Turn and Talk questions, pgs. 555-557 • Check for understanding, pg. 558 • On your own, pg. 559-560
<p>Activities and Resources</p>	<p>Warm Up: Activate Prior Knowledge pg. 555B and Spark your learning pg. 555D Mini Lesson: Build Your Understanding, pgs. 555-557 Guided Practice: Check Understanding, pg. 558 Independent Practice: On Your Own & Exit Ticket pg. 559-560 Resources: Into Math Teacher Edition Module 22</p>
<p>Suggested Modifications</p>	<p>Small Group Options- Page 555c</p> <ul style="list-style-type: none"> • On Track • Almost There • Ready for More <p>Math Center Option- Page 555c</p> <ul style="list-style-type: none"> • On Track- More practice for 22.4/Interactive glossary/Reader: The Pizza Puzzle • Almost there-Reteach 22.4 • Ready for more- Challenge 22.4 <p>Differentiation Options-</p> <ul style="list-style-type: none"> • Reteach & Challenge pg. 558

MA.2.MD.A.3

Estimate lengths using units of inches, feet, centimeters, and meters.

MA.2.G.A.1

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

LESSON 22.5

Student Learning Intentions (SLI) WALT: (We are learning to...)	22.5- We are learning to use visual models to show the equal shares of the same wholes do not need to have the same shape.
Student Learning Strategies	Students will: - use crayons to draw and partition shapes.
Success Criteria	I can draw to show the same wholes as equal shares in two different ways.
Formative Assessment (drives instructional decisions)	<ul style="list-style-type: none">• Turn and Talk questions, pgs. 561-562• Check for understanding, pg. 563• On your own, pg. 564
Activities and Resources	<p>Warm Up: Activate Prior Knowledge pg. 561B and Spark your learning pg. 561D</p> <p>Mini Lesson: Build Your Understanding, pgs. 561-563</p> <p>Guided Practice: Check Understanding, pg. 563</p> <p>Independent Practice: On Your Own & Exit Ticket pg. 564</p> <p>Resources: Into Math Teacher Edition Module 22</p>
Suggested Modifications	<p>Small Group Options- Page 561c</p> <ul style="list-style-type: none">• On Track• Almost There• Ready for More <p>Math Center Option- Page 561c</p> <ul style="list-style-type: none">• On Track- More practice for 22.5/My learning summary/Reader: The Pizza Puzzle/Standards Practice: Partition shapes into equal shares and describe the shares• Almost there-Reteach 22.5• Ready for more- Challenge 22.5 <p>Differentiation Options-</p>

MA.2.NBT.B.7

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

MA.2.G.A.3

Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

REFLECTIONS

INTERDISCIPLINARY CONNECTIONS: NEW JERSEY STUDENT LEARNING STANDARDS FOR ELA, SOCIAL STUDIES, SCIENCE AND/OR MATHEMATICS
